Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001

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PUBLIC UTILITIES COMMISSION

December 23, 2008

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
Kekuanaoa Building, First Floor
465 South King Street
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0083
HECO 2009 Test Year Rate Case
Rate Case Updates – Set #11

Enclosed is the eleventh set of updates to Hawaiian Electric Company, Inc.'s ("HECO") 2009 test year estimates reflected in the Application, Direct Testimonies, Exhibits, and Workpapers filed with the Commission on July 3, 2008. This set includes updates to the following:

- HECO T-1 – Robert A. Alm
- HECO T-20 – Tayne S. Y. Sekimura

HECO e-mailed the T-1 update yesterday evening, December 22, to the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs and on December 23 to the Department of Defense.

Very truly yours,

Enclosure

cc: Division of Consumer Advocacy
Michael L. Brosch, Utilitech, Inc.
Joseph A. Herz, Sawvel & Associates, Inc.
Dr. Kay Davoodi, Department of Defense
Richard W. Carlile, Department of Defense
Ralph Smith, Larkin & Associates

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RATE CASE UPDATE

Ref: R. A. Alm, HECO T-1, Policy Statement

I. SUMMARY

Hawaiian Electric Company, Inc. ("HECO" or "Company") hereby submits updates to its 2009 test year estimates. The primary driver of these updates is the requirements and commitments specified in the *Energy Agreement among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, and Hawaiian Electric Companies* ("HCEI Agreement"). The HCEI Agreement arises out of the Hawaii Clean Energy Initiative ("HCEI")[1], and documents a course of action to make Hawaii energy independent, while recognizing the need to maintain HECO's financial health in order to achieve that objective. As explained below, the HCEI Agreement committed HECO to facilitate the integration of substantial amounts of clean, renewable energy (wind energy in particular) into its grid and to enable electricity consumers to manage their electricity use more effectively. It also included certain regulatory changes to allow the Company to better support the initiatives of the HCEI Agreement.

These rate case updates include certain actions, resource commitments and regulatory restructuring that the Company will be implementing in the 2009 test year to carry out the provisions of the HCEI Agreement. The Company also updated its test year estimates according to other resource needs, corrections and updates to actual costs of which it became aware after the filing of its application and direct testimonies on July 3, 2008. In addition, as requested by the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs

[1] See HECO T-1, pages 48-49.

("Consumer Advocate"), the Company has updated its plant additions and associated rate base, depreciation and accumulated deferred income tax estimates for the 2009 test year.

In these updates, the Company requests the following:

- Establishment of a purchased power adjustment clause to recover non-energy purchased power agreement ("PPA") costs, pursuant to Section 30 of the HCEI Agreement
- Establishment of a revenue balancing account for a revenue decoupling mechanism to be effective upon issuance of the interim decision and order in this rate case, pursuant to Section 28 of the HCEI Agreement
- Inclusion of $2.2 million of the HCEI Implementation Studies costs, pursuant to Section 1 of the HCEI Agreement, in the 2009 test year revenue requirement (Rate Case Update, HECO T-7, page 2), should the Commission not accept the Company's proposal, to be filed in a separate application outside of this rate case, to recover these costs in the Renewable Energy Infrastructure Program/Clean Energy Infrastructure Surcharge ("REIP/CEI" Surcharge)
- A revenue increase not to exceed $97,011,000 over revenues at current effective rates at the time of the filing of the application (or $174,348,000 over revenues at present rates at the time of the filing of the application), as originally proposed in HECO's application filed on July 3, 2008, but considering the revenue requirement impacts of the rate case updates filed by HECO[2].

[2] HECO's current effective rates are the result of its existing "base" rates, plus the interim rate increase approved in HECO's pending 2007 test year rate case, Docket No. 2006-0386. HECO's revenues at present rates exclude the 2007 test year rate case interim rate increase surcharge revenues (HECO T-1, page 5).

With regard to the last bullet, Attachment 2 of the HECO T-23 update shows that, with its rate case updates, the Company's revenue requirement in the 2009 test year is $1,966,888,000, which represents a revenue increase of $100,035,000 over revenues at current effective rates.[3] This revenue increase would consist of an interim increase of $75,986,000 and a step increase of $24,049,000 for the Campbell Industrial Park Combustion Turbine Unit 1 ("CT-1") over revenues at current effective rates (Rate Case Update, HECO T-23, Attachment 1). This increase amount would be greater than the revenue increase that the Company originally proposed in its application filed on July 3, 2008. Settlement with the other parties in this rate case and the final decision and order may result in certain downward adjustments to the Company's updated test year revenue requirement. Should the resulting revenue increase exceed the amount proposed in its application, the Company agrees that the revenue increase approved by the Commission should revert back to the revenue increase proposed in the application.

The Company has taken other steps to minimize the impact of its rate case updates. First, in connection with its proposal to establish a revenue balancing account to be effective upon the issuance of the interim decision and order in this rate case, the Company prefers not to revise its 2009 test year estimates according to the reduction to its sales forecast. As the HECO T-2 rate case update explains, the dramatic increase in fuel price in the summer of 2008 and the collapse of the world financial markets have caused a significant decline in recorded electric sales. This has caused the Company to reduce its 2009 sales forecast for internal planning purposes. Incorporation of the sales forecast reduction in the 2009 test year would have driven down electric sales revenues, offset to some extent by a decrease in fuel expense, purchased power

[3] Rate Case Update, HECO T-23, Attachment 5 shows that the revenue increase over present rates would be $176,892,000.

expense and fuel inventory, and resulted in a net increase of $11,462,000 in the revenue increase for the 2009 test year (HECO Rate Case Update, T-23, Attachment 1). If the Commission does not accept the Company's proposal to establish the revenue balancing account at the issuance of the interim decision and order for this rate case, however, then the impact of the sales forecast reduction should be incorporated into the Company's 2009 test year estimates.

Second, as explained in the HECO T-15 update, the Company is reducing its test year labor expenses and associated employee benefits and payroll taxes by $1.7 million in view of the special circumstances and test year impacts brought about by the execution of the HCEI Agreement during the course of this proceeding. The Company has calculated this adjustment based on the sum of the labor expenses in its direct testimonies and the additional labor expenses in its rate case updates, less the other production operations and maintenance ("O&M") labor expenses. It has excluded other production O&M expenses from this calculation since the Power Supply Department has utilized unbudgeted supplemental labor to perform the functions of unfilled positions. (See HECO T-7, page 50 and HECO response to CA-IR-71.) In addition, HECO's rate case updates have attempted to reflect in its additions to labor expense the anticipated timing of the filling of the new positions included in the updates, rather than simply including the annualized labor expense of these new positions regardless of whether the Company expects to fill these positions at the beginning of 2009.

Third, of the update amount of $3,176,000 for Other Production Operations and Maintenance ("O&M") expenses, $2,220,000 relates to the estimated costs in 2009 for outside services for the HCEI Implementation Study described in the "D. Giovanni, HECO T-7, Other Production O&M Expense, Production Inventory" update submitted December 12, 2008. As stated in that update, HECO's strong preference is to recover the costs for the HCEI Implementation Study through the Renewable Energy Infrastructure Program ("REIP") Surcharge proposed in Docket No. 2007-0416. This is the approach agreed upon by the parties to the HCEI Agreement discussed below. However, the Commission has not yet approved the proposed REIP (which includes the surcharge mechanism), and will also need to explicitly approve the HCEI Implementation Study for the costs to be recovered through the surcharge. Since the other alternative is to include the costs in the 2009 test year, HECO has included the costs in this update pending approval of the REIP Framework, and the filing of an application pursuant to the Framework for the HCEI Implementation Study. HECO also stated that it recognizes that much of the total cost for the HCEI Implementation Study is expected to be incurred in 2009, due to the need to conduct the study in a comprehensive but expedited manner. Thus, if the cost is included in the 2009 test year O&M expenses, consideration should be given to normalizing the test year amount.

The table below categorizes the Company's adjustments to O&M expenses in its rate case updates:

O&M Adjustment	Expense Impact
HCEI Implementation Studies[4]	$2,220,000
HCEI-Related Labor and Non-Labor	$1,665,300
Labor Expense and On-Cost Adjustment	($1,729,000)
Employee Benefit Adjustment to Actuals	$873,000[5]
Other O&M Adjustments	$1,345,800

[4] As explained above, HECO proposes to recover the cost of the HCEI Implementation Studies through the REIP/CEI Surcharge.

[5] Of the $873,000 employee benefits amount, $176,000 can be attributed to the HCEI-related labor adjustment as shown in Attachment 3 of this update.

II. HCEI AGREEMENT

On October 20, 2008, the Governor of the State of Hawaii, the Department of Business Economic Development and Tourism ("DBEDT"), the Consumer Advocate and the HECO Companies (collectively the "HCEI Parties") signed the HCEI Agreement.[6] The HCEI Agreement resulted from the HCEI, a collaboration between the State of Hawaii and the U.S. Department of Energy with the goal of decreasing energy demand and accelerating the use of renewable, indigenous energy resources in Hawaii in the residential, building, industrial, utility, and transportation end-use sectors. The HCEI Agreement committed HECO to facilitate the integration of substantial amounts of wind and other renewable energy into its grid and to enable electricity consumers to manage their electricity use more effectively. It also included certain regulatory changes to allow the Company to better support the initiatives of the HCEI Agreement. HECO will be implementing the provisions of the HCEI Agreement in a number of proceedings before the Commission, including the HECO 2009 test year rate case. The sections below describe the HCEI Agreement-related items included in the rate case updates.

A. Purchased Power Adjustment Clause

Section 30 of the HCEI Agreement includes the following provision:

- The Hawaiian Electric Companies will be allowed to pass through reasonably incurred purchase power contract costs, including all capacity, O&M and other non-energy payments approved by the Commission (including those acquired under the feed-in tariff) through a separate surcharge.

[6] The HECO Companies are HECO, Hawaii Electric Light Company, Inc. ("HELCO") and Maui Electric Company, Limited ("MECO").

- If approved, these costs will be moved from base rates to the new surcharge.
- The surcharge will be adjusted monthly and reconciled quarterly.

Because this provision calls for the transfer of recovery of these purchased power costs from base rates to a new surcharge, it is appropriate for the Company to propose the purchased power adjustment clause in this rate case. (See Rate Case Update, HECO T-22.) HECO is not removing any purchased power costs from the test year revenue requirement. However, as shown in HECO-2220 to the HECO T-22 update, HECO is including $175,431,000 of electric sales revenues at proposed rates for the new purchased power adjustment clause in the 2009 test year.

The HECO T-20 update explains that the purchased power adjustment clause will enhance the Company's financial profile to maintain HECO's current credit rating which in turn will enable HECO to support new Hawaii Clean Energy initiatives. A financially stable utility will be able to invest in new renewable resources, infrastructure to facilitate the addition of new renewable resources from independent power producers, and conversion of the existing system to renewable technologies. In addition, the Company expects to enter into numerous new purchased power agreements for renewable energy. A creditworthy off-taker helps to attract prospective independent power producers.

B. Revenue Decoupling - Revenue Balancing Account

Section 28 of the HCEI Agreement provides agreements reached between the HCEI Parties on decoupling. As a result, on October 24, 2008, the Commission issued an order to initiate Docket No. 2008-0274 to investigate implementing a decoupling mechanism for the

Hawaiian Electric Companies. The order directed the HECO Companies and the Consumer Advocate to file a joint proposal on decoupling within sixty days of the date of the order. On December 3, 2008, the Commission issued an order extending the time for the HECO Companies and the Consumer Advocate to file the joint decoupling proposal to February 17, 2009.

In this rate case, the Company proposes a revenue decoupling mechanism to be effective upon issuance of an interim decision and order in the HECO 2009 rate case. HECO will propose a tariff in this rate case to establish a revenue balancing account that would remove the linkage between electric revenues and sales, effective on the date of the interim decision and order. This would implement the provision in paragraph 1 of Section 28 of the HCEI Agreement which states: "The revenues of the utility will be fully decoupled from sales/revenues beginning with the interim decision in the 2009 Hawaiian Electric Company Rate Case (most likely in the summer of 2009)." Attachment 1 to this update provides specifics on the revenue balancing account proposal.

The decoupling provisions in Section 28 of the HCEI Agreement also call for the application of a revenue adjustment mechanism based on cost tracking indices that would provide revenue adjustments for the difference between the amount determined in the last rate case and the current cost of operating the utility, return on and return of ongoing capital investment and any changes in state or federal tax rates. The Consumer Advocate and the Company also agreed that they would work towards a revenue adjustment mechanism in the decoupling proceeding for later implementation.

Although the HECO Companies will strive to enable the Commission to render a decision and order in the decoupling proceeding by the expected date of the interim decision and order in this rate case, it is not a certainty that the decoupling proceeding will conclude by that time. In order to ensure that at least the decoupling of revenues from sales takes place beginning at the issuance of the interim decision and order, the Company proposes the establishment of the revenue balancing account in this rate case.

Approval of the revenue balancing account in this proceeding is important for another reason. As discussed in the HECO T-2 update, HECO has reduced its sales forecast for 2009 by 173.1 gigawatt-hours ("GWh") (2.3% lower than the estimated sales in HECO's direct testimonies) due to lower residential use seen in 2008, record high oil prices in mid-2008, a deterioration in U.S. financial markets and a slowdown in the global economy. The update pointed out that the University of Hawaii Economic Research Organization's ("UHERO") September 2008 quarterly report stated that the downturn in the U.S. economy and record high oil prices had taken a huge bite out of the Hawaii tourism industry and projected a 9% decline in visitor arrivals in 2008 and declines of 0.1% and 0.8% in jobs in 2008 and 2009. Further, unemployment hit 4.5% statewide in September and October 2008, the highest level since the months immediately following the attacks of September 11, 2001. Based on the worsening economic outlook, the Company expects lower sales to continue through 2010.

A reduction of 173.1 GWh in electric sales would reduce electric sales revenues by $50,490,000 at current effective rates[7]. An attendant reduction in fuel and purchased power

[7] $1,861,751,000 minus $1,811,261,000 = $50,490,000. See Rate Case Update, HECO T-3, Exhibits HECO-302 and HECO-305.

expenses and fuel inventory would partially offset the impact of the sales reduction. Attachments 7 and 8 of the HECO T-23 update show the revenue increase over current effective rates with and without inclusion of the sales forecast reduction. The difference between the two scenarios indicates that incorporation of the sales forecast reduction into the test year would result in a substantial increase of $11,462,000 to HECO's requested rate relief (Rate Case Update, HECO T-23, Attachment 1).

Decoupling HECO's revenues from sales upon issuance of the interim decision and order in this proceeding would allow HECO to forego incorporating the sales forecast reduction and its revenue and cost impacts into its test year estimates. Rather than recover the shortfall in revenues through the interim increase (or final increase once the Commission issues the final decision and order), the Company will recover any difference between its approved revenue requirement and actual sales through a revenue balancing account. However, if the Commission does not accept the proposal to establish a revenue balancing account in this proceeding, HECO should be allowed to revise its 2009 test year estimates according to the sales forecast reduction.

HECO is in the process of developing a proposed tariff for the revenue balancing account. Attachment 1 to this update provides further details on HECO's revenue balancing account proposal.

C. HCEI Implementation Studies

Pursuant to the HCEI Agreement, the Hawaiian Electric Companies are committed to integrating the maximum attainable amount of wind energy on their systems. "In order to facilitate a future in which the abundant, sustainable and indigenous wind resources of our islands supply a significant portion of the total energy demand on Oahu", the HCEI Parties committed to the following:

- Hawaiian Electric commits to continue negotiations for the purchase of renewable energy from Grandfathered Projects and to efficiently complete the Oahu Request for Proposals for Renewable Energy Projects ("RE RFP"), which are expected to add up to 235 MW of new clean renewable energy resources located on Oahu.
- Hawaiian Electric commits to integrate, with the assistance of the State to accelerate the commitment, up to 400 MW of wind power into the Oahu electrical system that is produced by one or more wind farms located on either the island of Lanai or Molokai and transmitted to Oahu via undersea cable systems (the "Big Wind" projects).

The HCEI Agreement provides that Hawaiian Electric is responsible for funding, constructing, operating and maintaining all land-based connections and infrastructure improvements to the existing Hawaiian Electric system up to the interconnection point located at the on-shore termination of the State-owned undersea cable systems on Oahu. The HCEI Agreement also provides that all necessary engineering, technical and financial studies and analyses to identify Big Wind project integration and performance requirements, undersea cable systems requirements, and Hawaiian Electric system modifications, infrastructure additions and operating solutions ("HCEI Implementation Studies") will be conducted in a comprehensive but expedited manner.

To successfully accomplish the objective of integrating renewable energy from the neighboring islands, minimize curtailment of as-available energy, and extract the most value of a

Big Wind project, the parties agree to work together on a set of HCEI Implementation Studies[8] to identify:

- The technical requirements of and configuration for the inter-island undersea cable systems to ensure their high availability in order to facilitate the transfer of all available energy from the wind farm.
- The modifications and additions needed for existing Oahu and neighbor island AC transmission grids to reliably interconnect power from the inter-island high-voltage DC cables and transmit the wind farm energy to Oahu's distribution system.
- The energy storage or flexible generation (providing ancillary services and other attributes such as load following, frequency response, regulation, quick start, fast ramping) needed to offset the variable nature of the wind energy and to minimize the curtailment of wind or other intermittent energy projects.
- The modifications needed on existing generating units (such as cycling conversion, etc.) to offset the variable nature of the wind energy and to minimize the "spilling" of wind.
- The changes to operational practices and procedures needed to operate the island grids and integrate their operations with the wind farm.

The HCEI Parties agree to base the design and development of a neighbor island wind plant(s), the undersea cable systems, and the on-island transmission, generation, energy storage, and all other infrastructure necessary for the successful integration of the Big Wind projects, on

[8] The parties agree to base the design and development of a neighbor island wind farm, the undersea cable systems, and the on-island transmission, generation, energy storage, and all other infrastructure necessary for the effective integration of the wind farm, on the results of these Implementation Studies.

the results of these HCEI Implementation Studies. Thus, the HCEI Implementation Studies, which consist of numerous coordinated studies and analyses on the various issues and topics to be addressed (the detailed scope of many components of which are still being developed and refined), are essential to bring the Big Wind projects on-line. The HECO T-7 update discusses the HCEI Implementation Studies in detail. The test year estimate of these studies is $2,220,000 of non-labor outside services costs (Rate Case Update, HECO T-7, page 2).

The HCEI Parties agreed that the cost of the HCEI Implementation Studies will be recovered through the CEI Surcharge (HCEI Agreement, Section 3, page 11). The CEI Surcharge is equivalent to the REIP Surcharge that the HECO Companies proposed in Docket No. 2007-0416.[9]

Section II.B.1 of the proposed REIP Framework[10] provides that electric utilities may recover the capital costs, deferred costs relating to software development and licenses, and/or <u>other relevant costs approved by the Commission</u> of a Renewable Energy Infrastructure Project ("REI Projects") by means of the REIP Surcharge. REI Projects include infrastructure projects that can assist in the integration of more as-available and other non-dispatchable renewable projects onto the electrical grid than could otherwise be added without such projects. (See Section III.B.1.a.ii of the REIP Framework.) On October 22, 2007, the parties to Docket No. 2007-0416 notified the Commission that they were in agreement on all issues and, with respect

[9] On November 28, the HECO Companies and the Consumer Advocate filed a letter agreeing that the REIP Surcharge proposed in Docket No. 2007-0416 is substantially similar to the CEI Surcharge and that the REIP Surcharge satisfies the HCEI Agreement provision that the implementation procedure of the CEIS recovery mechanism be submitted for Commission approval by November 30, 2008. Because HECO considers the REIP and CEI surcharges to be one and the same, this update will refer to this surcharge as the "REIP/CEI Surcharge."
[10] Exhibit "B" to the HECO Companies' Reply Position Statement, filed September 17, 2008 in Docket No. 2007-0416.

to renewable energy implementation study projects (under section III.B.1.a.ii), the costs would be recovered through the REIP Surcharge after the Commission approves the study project.

The HECO Companies plan to file a separate application to recover the HCEI Implementation Study costs through the REIP/CEI Surcharge. Approval of this recovery would eliminate the need for the Company to increase its test year other production O&M expenses by the cost of the studies. Alternatively, if the Company does not recover the cost of the HCEI Implementation Studies through the REIP/CEI Surcharge, it should be allowed to recover this cost through base rates approved in this rate case. Attachment 1 of the HECO T-23 update shows that the revenue requirement impact of the HCEI Implementation Studies is $2,452,000.

D. <u>Labor Costs for HCEI</u>

The requirements of the HCEI Agreement will significantly transform the Company in how it does business and how it will need to be organized. In the 2009 test year, HECO will need to expend resources for HCEI commitments that it is not proposing for recovery through the REIP/CEI Surcharge. (However, HECO would be willing to discuss surcharge recovery of these items should the Consumer Advocate take the position that such recovery is appropriate.) Generally, these are labor expenses for new positions and non-labor outside services expenses required to fulfill the requirements of the HCEI Agreement. The new positions will either be dedicated or substantially involved in HCEI activities. HECO has already filled some of these positions. It has also attempted to reflect in the test year the anticipated timing of filling the HCEI-related and other new positions included in the rate case updates. The new positions required to address HCEI Agreement requirements include the following:

- Renewable Energy Power Purchase Division – This is a new division in the Power Supply Services Department created to manage the increasing number of renewable energy power purchase negotiations. This workload increase has been a direct result of the increase in recent years in the cost of electric energy generated by fossil fuels and the subsequent changes in state and corporate policies taken to mitigate this impact through new renewable energy power purchase contracts. In addition, the HCEI Agreement has formally incorporated accelerated deadlines and project milestones for many of the project proposals by these independent power producers ("IPP"). The focus on integrating up to 400 MW of neighbor island wind energy into the Oahu grid and the desire expressed in the HCEI Agreement to renegotiate existing IPP contracts that are based on the avoided cost of fossil fuel will soon add additional demands to the existing Power Purchase Division. The existing Power Purchase Division will continue as the Power Purchase Contract Administration Division. This reorganization results in a net increase of two positions in the Power Supply Services Department.
- Renewable Energy Planning Division – This is a new division created to manage the increasing work load associated with the integration of new renewable energy resources which is being significantly realized through new renewable energy power purchase contracts with IPPs.

While the heavy work load of IPP project proposals addressed by the System Planning and Power Supply Services Departments has been building for several years, the HCEI Agreement has formally set accelerated deadlines and project milestones for many new renewable energy IPP projects. The HCEI Agreement focus on integrating up to 400 MW of neighbor island wind energy into the Oahu grid, integrating the three Oahu projects "grandfathered" from competitive bidding, integrating the multiple renewable energy projects that result from the Oahu Renewable RFP, and integrating numerous other new renewable energy projects located across Maui County and the Big Island (such as, among others, two new major wind plant projects on Maui, and a significant new biomass project and the expansion of geothermal power production on the Big Island) has dramatically increased work demands on the System Planning Department as a whole, and most significantly, on the Transmission Planning Division.

The addition of the new Renewable Energy Planning Division results in a net increase of four positions in the System Planning Department. The new division's primary responsibility will be to lead the development of appropriate strategies, methods, plans, and policies to achieve successful integration of renewable energy projects for HECO, HELCO and MECO. Their work will include, among other activities:

1. Assessing the effect of new renewable energy projects on the utility grid and ensuring the safe and reliable operation of the system;
2. Developing project performance standards and interconnection requirements;
3. Developing new and/or modifying existing system operating procedures;
4. Identifying appropriate grid-side mitigation measures;
5. Assessing the operational curtailment potential for new resources;
6. Participating in power purchase contract negotiations with IPPs and advising senior management and the utility negotiating team on power purchase contract terms and strategy;
7. Providing utility overview of the IPP project design and construction to assist in ensuring project compliance with interconnection requirements and power purchase contract terms;
8. Monitoring renewable energy project start-up, testing and performance; and
9. Serving as a technical resource to support utility administration of power purchase contracts.

To date, this work has been managed by the Transmission Planning Division of the System Planning Department. However, other important projects and studies that require the attention of the Transmission Planning Division have been deferred to accommodate the growing and high priority work demands in support of integrating new renewable energy resources. Thus, the primary responsibility for this work will be transitioned to the new Renewable Energy Planning Division so that, in time, the Transmission Planning Division will be able to address its existing work backlog and refocus on important core transmission planning activities.

- Power Supply Engineering - An additional Project Manager position has been added to the Project Management Division in the Power Supply Engineering Department based on a forecasted sustained increase in the project management workload associated with the projects, programs and studies required to fulfill the HECO commitments made in the HCEI Agreement. These future projects include projects for the conversion of baseload generating units to cycling operation, conversion of fossil-fired generating units to biofuels, and improvements in operational flexibility of existing generating units to enable increased integration of variable renewable generation onto the HECO system. Other projects include enabling the cold layup (i.e., long term de-activation) of generating units and fuel infrastructure additions to accommodate biofuels.
- Customer Solutions Department - A Director, Special Projects position has been filled and has the responsibility of developing the overall strategy to guide the Company's efforts to implement demand response programs identified in the HCEI Agreement to maintain system reliability as the amount of renewable energy increases. The

requirements and the deadlines included in the HCEI Agreement increase the scope, intensity, and complexity of work related to demand response as compared to work identified prior to the Agreement. The HCEI Agreement requires the utilities to explore the use of demand response as a mechanism to accommodate more renewable energy and to manage frequency fluctuations resulting from intermittent renewable resources connected to the grid, and provide a recommendation for such use to the Commission by December 31, 2009. The Agreement also requires the utilities to allow demand response to provide a variety of ancillary services and encourage those demand-side ancillary services if they can be provided more precisely than supply-side resources. (HCEI Agreement, Section 13, pages 23-24.)

- Pricing Division - The addition of a new Senior Rate Analyst is necessary to respond to the numerous rate initiatives resulting from the HCEI Agreement that cannot be addressed by the existing staff. In addition to time-of-use rates, inclined block rates, dynamic program pricing, and green pricing, the HCEI Agreement also includes the following (citations below refer to the HCEI Agreement):

    - Photovoltaic ("PV") Host Program (Section 4, The Solar Opportunity, pages 11-13);
    - Feed-in tariffs (Section 4, The Solar Opportunity, page 12; Section 7, Feed-In Tariffs, pages 16-17; and Section 19, Net Energy Metering, page 28);
    - Revised net energy metering tariff (Section 4, The Solar Opportunity, page 12; and Section 19, Net Energy Metering, page 28);
    - Time-of-use rates to encourage off-peak charging of electric vehicles (Section 10, Greening Transportation, pages 18-20);
    - Interim time-of-use rates (Section 14, Advanced Metering Infrastructure, pages 24-25);
    - Lifeline rates (Section 14, Advanced Metering Infrastructure, page 25; and Section 20, Lifeline Rates, page 29);
    - Mandatory time-of-use rates (Section 15, Pricing Principles and Programs,

pages 25-26);
- Revenue decoupling (Section 28, Decoupling from Sales, pages 32-33).

Many of these rate initiatives also have timelines, which means that the existing staff is limited in its ability to postpone work on some initiatives in order to complete others.

- The General Accounting Department - A new Lead Corporate Accountant is required to address the increase in workload as a result of the new commitments arising from the HCEI Agreement. With the HCEI Agreement, the Company will need to evaluate on a continuous basis the accounting implications of renewable energy power purchase agreement proposals. In addition, the requirements under generally accepted accounting principles ("GAAP") will necessitate on-going continuous review and assessment of the contracts, once executed. The HCEI Agreement also contemplates additional rate cases with changes in the ratemaking model, which may require changes in accounting for certain transactions, and increases the reconciliation process for the accounts impacted. In addition, the Lead Corporate Accountant will be involved in transitioning the Company to the International Financial Reporting Standards ("IFRS"), which the Company anticipates will be required by 2014.
- Management Accounting and Financial Services - A Senior Financial Analyst is being added to meet HECO's HCEI Agreement commitments and other requirements including supporting rate cases and other regulatory proceedings dealing with changes in ratemaking, new surcharge mechanisms as contemplated under the HCEI Agreement, new IPP contracts, the evaluation of the bids to HECO Renewable Energy RFP and the MECO RFP, and various new projects (including advanced metering infrastructure

("AMI"), PV Host, interisland cabling, biofuel refinery, asset management, renewable energy credit ("REC") valuation and trading, rate restructuring, financing, and feed-in tariff rates).

- Energy Projects Department - In order for HECO to meet its HCEI commitments, the Energy Projects Department will hire two additional Senior Technical Services Engineers, beginning July 2009. One of the two Senior Technical Services Engineers will be assigned to the PV Host program, which is one of the initiatives identified in the HCEI Agreement. This engineer will be required to conduct site assessments, develop bid specifications for PV developers, evaluate proposals, oversee construction, and monitor the PV system performance. The Energy Projects Department's existing staff is fully allocated to other projects and without this new position the PV Host program will not have sufficient resources to meet its aggressive schedule and the expected customer demand for participation. The second Senior Technical Services Engineer will assist with development of distributed generation ("DG") projects. DG units will provide additional quick start generating capacity on Oahu to allow integration of intermittent wind energy into the HECO system. This engineer will work on the development of DG units at a number of potential sites, including at military bases. In 2009, the labor expense for this position will be charged to a clearing account for preliminary engineering for the military DG project. Accordingly, these charges will not be reflected in the test year O&M expenses.

E. Non-Labor Costs for HCEI

In addition to the labor expenses described in the section above, the Company will also incur non-labor outside services costs to implement its commitments in the HCEI Agreement. These include the following:

- PV Host Program (Rate Case Update, HECO T-7, page 45) - $200,000 for system integration analysis, project site assessment support, program design and legal support for the PV Host Program.
- AMI - $80,300 for a management consultant for the AMI Meter Data Management System ("MDMS") (Rate Case Update, HECO T-8, page 5), and $197,000 of research and development ("R&D") costs to 1) extend the current eMeter contract into the first quarter of 2009, 2) select either eMeter or Itron for Phase 2 testing for the remaining nine months in 2009, and 3) contract with Luminant to continue information technology support (Rate Case Update, HECO T-14, pages 1-2).
- Feed-in Tariff Proceeding (Docket No. 2008-0273) - $115,000 for consulting services to research and assist in the design of the tariff and to develop the pricing methodology, and engineering consultants and legal services to support the proceeding.
- Decoupling Proceeding (Docket No. 2008-0274) - $80,000 for a pricing consultant to help design and support a decoupling mechanism in the Decoupling Proceeding.

III. LABOR EXPENSE ADJUSTMENT

As explained above, HECO will need to increase its headcount in a number of areas to be able to achieve its commitments in the time frames specified in the HCEI Agreement. Recovery of these HCEI-related costs in the 2009 test year is essential to enable HECO to meet its commitments in the time frames required. At the time the Company filed its 2009 test year rate case on July 3, 2008, it could not have foreseen what the HCEI Agreement would ultimately require and thus could not have included the adjustments explained in the previous sections in its original test year estimates. During the course of most rate case proceedings, events occur that cause changes to test year estimates. However, the HCEI Agreement (and the reduction in electric sales) have had comparatively larger impacts than changes experienced in other recent rate case proceedings. The HCEI Agreement has also specified a number of initiatives requiring regulatory proceedings with short time frames. These requirements will tax the resources of all parties involved in the HCEI activities. Therefore, it is important to facilitate as much as reasonably possible the processing of these proceedings, including this rate case.

To this end and to minimize the issues regarding labor expenses in this rate case, the Company is proposing for this rate case only, a labor expense and associated employee benefit and payroll tax reduction of $1,729,000. The HECO T-15 update explains the time series regression analysis that the Company used to estimate this amount. (See Rate Case Update, HECO T-15, Attachment 6.) This adjustment will bring HECO's test year head count and labor expenses closer in line with the actual headcount that the Company is experiencing at the end of 2008. The Company derived adjustments to the labor expenses in the transmission, distribution, customer accounts, customer service and administrative and general block of accounts and made corresponding adjustments to employee benefits and payroll taxes (Rate Case Update, HECO T-15, Attachment 6, page 5). It did not apply the adjustment to production labor expenses since this area has covered hiring shortfalls by using unbudgeted supplemental labor to perform the associated work.

The Company applied these adjustments to the updated O&M expense amounts presented in the rate case updates of HECO T-8 (transmission and distribution), T-9 (customer accounts), T-10 (customer service), T-11 (administrative and general) and T-16 (taxes), as shown in Attachment 9 of the HECO T-23 update, and used the results in its revenue requirement runs to derive its updated results of operations (HECO T-23, Attachments 1-8). The Company is presenting the labor expense adjustment in this fashion so that it could finalize and submit the individual witness updates at an earlier date to allow for earlier review.

IV. EMPLOYEE BENEFITS UPDATE TO ACTUALS

HECO's direct testimony on employee benefits (HECO T-13) estimated group insurance premium rates for the 2009 test year. Since the filing of direct testimony, the Company has received actual premium rates effective January 1, 2009 and has updated long-term disability benefits (–$91,000), FlexPlan credits less prices (+$139,000), and group medical plan (+$1,152,000) , group dental plan (–$73,000), group vision plan ($2,000) and group life insurance plan costs (–$259,000). HECO also adjusted the average number of employees covered by the group insurance plans according to the HECO T-15 update. The resulting adjustment is a net increase of $870,000 in employee benefit expenses in the test year. (See Rate Case Update, HECO T-13, Attachment 1, pages 1-2.) In addition, there is a $553,000 increase in the credit for employee benefits transferred (Rate Case Update, HECO T-11, pages 7-8) in the 2009 test year as a result of the change in employee benefits expenses and changes in labor charges.

V. PLANT ADDITIONS UPDATE

In informal discussions, the Consumer Advocate indicated its desire for the Company to also update its plant additions if the Company were to update its test year O&M expenses. As a result, the Company has updated its estimates for plant additions and contributions in aid of construction ("CIAC") for 2008 and for the 2009 test year. Based on the latest snapshot of its capital budget and a review of the cost estimates and plant addition dates for the respective projects, the updated plant addition estimates (as shown on Rate Case Update, HECO T-17, page 5) are $103,523,000 and $288,334,000 for 2008 and the 2009 test year, respectively, a decrease of $6,697,000 for 2008 and increase of $23,655,000 for the 2009 test year. While the changes to the plant addition estimates result in a net increase of $16,958,000 for both 2008 and 2009, the impact of the net increase on the test year 2009 revenue requirement is much lower, as revenue requirements associated with rate base items are for the return of and return on the investment as compared to revenue requirements for expenses which cover the costs included in the test year and associated revenue taxes.

The changes in the plant addition estimates for projects are primarily due to 1) the addition of new projects since the time of the forecast used in direct testimony, 2) projects that were estimated to be completed in 2008 and are now forecast to be completed in 2009 and 3) updates in project schedules and cost estimates.

Plant additions in 2009 that HECO initiated after the filing of direct testimony included projects such as the following:

1) Airport Dist Feeders 2B & 3B (P0001567) for $1,458,836. This project will install two new breakers at the Airport Substation and two new 12 kV feeders from the

substation to the Honolulu International Airport. The new feeders will provide an alternate route for power to the main terminal.

2) Waiau-Wahiawa SW OPGW (P0001644) for $2,653,759. The Waiau-Wahiawa 138 kV transmission line shield wire replacement project consists of the replacement of the existing galvanized shield wire with optical ground wire (OPGW). The purpose of the shield wire is to protect the transmission conductors from a direct lightning strike and dissipate the energy before it causes damage to critical components of the transmission system. Installing OPGW on the Waiau-Wahiawa line will provide a diverse communication channel and lightning protection.

3) Halawa-School OPGW (P0001681) for $1,246,101. The Halawa-School 138 kV transmission line shield wire replacement project also consists of the replacement of the galvanized shield wire with OPGW. Installing OPGW on the Halawa-School line will provide a diverse communication channel and lightning protection.

4) Waiakamilo Tsf#1 Replace (P0001691) for $802,287. This project replaces the existing Waiakamilo #1 transformer. In July 2008, System Operations found metal particles within the main tank of Waiakamilo transformer #1 indicating a serious defect.

Examples of projects that HECO originally estimated to complete in 2008 and now expects to complete in 2009 include:

1) H8 Blr Elec Warm Sys (P0000056) for $1,042,211. Project retrofits Honolulu Unit 8 boiler with an electric warming system boiler water to keep the unit hot, pressurized, and ready to start up on short notice. This will replace the present practice of

intermittently firing the unit on oil that results in soot deposits. Keeping the boiler hot eliminates the pressure and thermal cycles, thus increasing the reliability of the boiler components.

2) W7 Waiau FWH 75 Replace (P0000484) for $1,040,894. The existing Waiau 7 Feedwater Heater #75 is deteriorated. Replacement of this feedwater heater is necessary for continued efficient, reliable operation of Waiau 7.

3) H9 Honolulu FWH 94 Replace (P0001131) for $825,655. The existing Honolulu Feedwater Heater #94 is deteriorated. Replacement of this feedwater heater is necessary for continued efficient, reliable operation of Honolulu 9.

4) Kahe-Permanente 46kV Nanakuli (P0001552) for $2,174,053. This project replaces 12 truss-reinforced poles along Farrington Highway in Nanakuli with 11 steel and one concrete pole.

The Maunalani Hts Reliab Impvmts (P0001121) 2009 plant addition cost estimate also increased by $1,030,344 to $1,598,758 because about $1 million of costs were erroneously forecast as plant additions in 2010 (rather than 2009) at the time the estimates for the direct testimony were finalized.

CIAC was updated to reflect more current information. The updated in-kind CIAC estimates are $3,805,000 and $3,998,000 for 2008 and the 2009 test year, respectively, resulting in decreases of $59,000 and $206,000 for 2008 and for the 2009 test year, respectively. The updated cash CIAC estimates are $8,945,000 and $8,460,000 for 2008 and the 2009 test year, respectively. The $2,699,000 increase in cash CIAC for 2008 reflects annualizing the September 2008 year-to-date cash CIAC for the Customer Installation Department. The 2009 test year cash

CIAC increase of $1,706,000 is due in large part to the addition of the Chevron Electrical Upgrade project that was not known at the time the estimates for the direct testimony were prepared.

As a result of the update to plant additions, HECO decreased its depreciation expenses by $217,000 and its accumulated depreciation by $146,000 in the 2009 test year (Rate Base Update, HECO T-14, page 9). HECO also accounted for the associated changes to the State investment tax credit ("ITC") and accumulated deferred income taxes ("ADIT") in Attachments 3 and 4 in Rate Case Update, HECO T-16. However, the incremental impact on ADIT and State ITC was not separately calculated for the plant addition changes.

VI. OTHER ADJUSTMENTS

HECO has made other adjustments according to new developments or better information since the filing of its direct testimony. These include the following:

- Iwilei Fuel Pipeline - This adjustment is a decrease in other production maintenance non-labor expense of $200,000 as the work will be performed in 2008 rather than in the 2009 test year. (Rate Case Update, HECO T-7, pages 42-43).
- Asset Management Group - An additional $221,800 in T&D O&M labor expenses is required to fund a new Asset Management group consisting of five employees in the Energy Delivery Process Area. (Rate Case Update, HECO T-8, pages 6-8). The new Asset Management group will be responsible for providing recommendations regarding Energy Delivery's maintenance and replacement of HECO's aging T&D assets before deterioration of these facilities affect service quality and reliability. To address the impacts of the aging infrastructure and the need to upgrade it, the Asset Management

Department will provide centralized oversight of the assessment and evaluation of the performance of the different T&D assets. Using inspection records, test data, age, and outage history as well as other information available on the asset, the Asset Management group will evaluate the condition and performance of the asset and provide recommendations on the maintenance or replacement of the system equipment. The establishment of this group is consistent with the HCEI Agreement which states that "maintaining and upgrading the electric grid is essential to supporting reliable, renewable energy and to using technologies (such as advanced metering) that give customer options for better managing energy use" (at 43).

- Temporary Meter Readers - Estimated expenses for the meter reading expenses were increased by $353,000 for the cost of six additional temporary meter readers 1) to fulfill the functions of regular employees who are assigned to the CIS project through the in-service date and during the transition period for the new system, and 2) to replace regular meter readers who will supplement HECO's current senior field investigator staff to address the increase in bill inquiries ("BI"), thereby enabling the Company to better and more quickly respond to customer inquiries. (See Rate Case Update, HECO T-9, pages 1-2.)
- Sr. Executive Vice President's Office – HECO has <u>reduced</u> its labor expenses by $294,000 to reflect the elimination in the test year of the two positions that made up this office. Non-labor costs of $63,000 for the office were also removed from the test year revenue requirement.
- Oahu Electric System Analysis - The Company proposes to increase its test year 2009

R&D estimate for the Oahu Electric System Analysis by $250,000 based on a consulting services agreement the Company executed in November 2008 with the University of Hawaii to perform the study (Rate Case Update, HECO T-14, pages 2-3).[11] As explained in HECO T-14, page 34, the Oahu Electric System Analysis is an R&D project to characterize, evaluate and formulate controls, storage and interconnection recommendations with the objective of increasing the Company's renewable energy portfolio.

- Rent Expense – An increase of $841,000 in the test year rent expense is due to additional office space required for 1) HCEI Agreement initiatives which require additional staffing and new organizations in several departments, 2) additional staffing and new groups for other organizational changes not related to the HCEI initiatives, 3) relocation of the Meter Engineering Division due to a water incursion problem in the basement of the Ward I Building, and 4) reassessment of space requirements for other divisions due to growth (Rate Case Update, HECO T-14, pages 3-7).
- Ward Plant Repairs – As it is now anticipated that approximately 70% of the Ward parking structure ramp repairs will be completed in 2008, the Company removed $440,000 from the test year A&G expenses. Due to the advancement of the Ward ramp repair, the Company plans to repair the concrete asphalt in the vicinity of the Archer Lane Guard Shack, as the existing asphalt is significantly damaged and is becoming a safety hazard to employees. The total estimated cost of this project is $525,000 in the 2009 test year. (Rate Case Update, HECO T-14, pages 7-8).

[11] General Electric is under contract with the University of Hawaii's Hawaii Natural Energy Institute to perform the Oahu study.

VII. CONCLUSION

As discussed above, certain HCEI commitments and other requirements have necessitated updates to the Company's 2009 test year estimates. These associated activities will facilitate the integration of renewable energy into the Company's grid as called for in the HCEI Agreement and help maintain service quality and reliability. Therefore, recovery of these costs is appropriate. To facilitate the processing of this rate case, the Company has taken a number of measures to mitigate the impact on the 2009 test year revenue requirement and requested revenue increase.

The HCEI Agreement addresses decoupling from sales for all HECO Companies (see pages 32 and 33). The HCEI Agreement identifies two mechanisms that together combine to implement decoupling from sales:

1. Revenue decoupling: "The revenues of the utility will be fully decoupled from sales/revenues beginning with the interim decision in the 2009 Hawaiian Electric Company Rate Case (most likely in the summer of 2009)."[1]
2. Revenue adjustment mechanism (a mechanism to adjust utility rates for trends in input prices, demand, and other external business conditions that affect utility earnings): "The utility will use a revenue adjustment mechanism based on cost tracking indices such as those used by the California regulators for their larger utilities or its equivalent and not based on customer count. Such a decoupling mechanism would, on an ongoing basis, provide revenue adjustments for the differences between the amount determined in the last rate case and:

   (a) The current cost of operating the utility that is deemed reasonable and approved by the PUC;

   (b) Return on and return of ongoing capital investment (excluding those projects included in the Clean Energy Infrastructure Surcharge); and

   (c) Any changes in State or federal tax rates."[2]

[1] HCEI Agreement, page 33.
[2] HCEI Agreement, page 33.

On October 24, 2008, the Commission issued an Order Initiating Investigation and opened Docket No. 2008-0274 ("Decoupling Docket") to examine implementing a decoupling mechanism for the HECO Companies. The Order required that the HECO Companies and the Consumer Advocate submit to the Commission a joint proposal on decoupling that addresses all of the factors identified in the HCEI agreement within 60 days.[3]

In meetings between the Consumer Advocate and HECO, it was agreed that HECO would initiate the revenue decoupling mechanism upon receipt of an interim order in the HECO 2009 rate case by proposing to establish a revenue balancing account ("RBA") in its HECO 2009 rate case update.

The RBA proposed by HECO would remove the linkage between electric revenues and sales immediately upon the approval of an interim rate increase in the HECO 2009 rate case as follows:

1. The target base revenue for the remainder of 2009 (assuming that interim approval is received in 2009) would be the revenue requirement approved by the Commission in the interim decision adjusted for the revenue requirements for fuel and purchased power. This revenue would be allocated by month and prorated within the month of the issuance of the interim order.
2. The RBA would accumulate the monthly difference between actual recorded electric revenues and the target revenues, both adjusted for revenue requirements for fuel and

[3] Subsequently, in its December 3, 2008 Order in this docket, the Commission extended the deadline for the joint proposal to February 17, 2009.

purchased power for the period between the date of interim rate relief and the effective date of final rates.

3. The proposed RBA will also reflect the accrual of interest at the rate of the then-approved rate of return applied to the simple average of the beginning and ending balance in the balancing account each month.
4. On the effective date of the final rates (approved in the final decision and order for this rate case) the RBA would begin to accumulate the monthly difference between actual recorded electric sales revenues and the final approved target revenue, both adjusted for the revenue requirements of fuel and purchased power.
5. It is anticipated that HECO will also establish a process with Commission approval that would allow the recovery/refund of any under/over collection of electric sales revenues as reflected in the RBA. An example of such a process is as follows:
   a. On November 30, 2009, HECO would notify the Commission and the Consumer Advocate of: 1) the estimated year-end balance in the RBA based on the October 31, 2009 balance and the forecasted charges/credits to the RBA, including interest, for November and December 2009; and 2) the tariff rates that reflect the inclusion of the estimated recovery/refund of the estimated year-end RBA balance
   b. Based on the assumption that the Commission would have approved a revenue adjustment mechanism ("RAM"), the new rates would also reflect the new revenue requirement developed by the RAM, to be effective on January 1, 2010.

It is HECO's intention that a RAM will be further discussed in a proposal submitted in the Decoupling Docket. HECO also intends that the proposal will include provisions agreed upon between the Consumer Advocate and HECO that will outline the scope and timing for additional work on the RAM. In the Decoupling Docket, the proposal for the RAM will be submitted and reviewed per the procedural schedule to be approved by the Commission.

Revenue Requirement Impact
- Operations and Maintenance Expense

Test. No.	Item	Direct Testimony CIP CT-1 Adjs.	W/O HCEI "Big Wind" Line Item Changes Direct Sales Current Effective (T-23 Upd., Att. 9, p. 1)	Reverse Rate Case Update CIP CT-1 Expense (T-7 Upd., Att. 14, p. 3, 4)	Add Rate Case Update CIP CT-1 Full Cost (T-7 Upd., Att. 14, p. 3, 4)	Labor Expense and On-Cost Adjustment (T-15 Upd., Att. 6, p. 5-6) (T-23 Upd., Att. 9, p. 1)	W/O HCEI "Big Wind" With CT-1 With Labor Expense Adj. Direct Sales Current Effective	HCEI Related Labor	HCEI Related Non-Labor	HCEI Implem. Studies ("Big Wind")	Employee Benefits Adjustment to Actuals	Other Line Items
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
T-7	PRODUCTION											
	(Note: T-7 Update as filed included Big Wind)											
	HCEI Implementation Study - Environmental Dept.		$ 20,000.00									
	HCEI Implementation Study - Power Supply Engineering Dept.		$ 400,000.00									
	HCEI Implementation Study - System Planning Dept.		$ 900,000.00									
	HCEI Implementation Study - System Operation Dept.		$ 200,000.00									
	HCEI Implementation Study - Power Supply O&M Dept.		$ 700,000.00									
	Subtotal ("Big Wind")		$ 2,220,000.00							$ 2,220,000.00		
	Green House Gases		$ 45,000.00									$ 45,000.00
	Renewable Energy Power Purchase Total = $305,000											
	Renewable Energy Power Purchase Division (Labor)		$ 161,000.00					$ 161,000.00				
	Renewable Energy Power Purchase Division (Non-Labor)		$ 144,000.00						$ 144,000.00			
	Renewable Energy Planning Division Total = $254,000											
	Renewable Energy Planning Division (Labor)		$ 149,000.00					$ 149,000.00				
	Renewable Energy Planning Division (Non-Labor)		$ 105,000.00						$ 105,000.00			
	ITS Cost		$ (41,000.00)									$ (41,000.00)
	Phone		$ (10,000.00)									$ (10,000.00)
	17" LCD Flat Panel Monitors		$ (4,000.00)									$ (4,000.00)
	CIP CT-1 Maintenance (T-7 Upd., Att. 14, p. 3-4)		$ (3,000.00)									$ (3,000.00)
	CIP CT-1 Operation (T-7 Upd., Att. 14, p. 3-4)		$ (12,000.00)									$ (12,000.00)
	Photo Voltaic Engineer		$ 33,000.00					$ 33,000.00				
	Production Simulation		$ 55,000.00									$ 55,000.00
	Kahe Fuel Oil Tank #11 Maintenance		$ 329,000.00									$ 329,000.00
	Iwilei Fuel Oil Pipeline		$ (200,000.00)									$ (200,000.00)
	Breaker Retrofit		$ (79,000.00)									$ (79,000.00)
	Cathodic Protection		$ (50,000.00)									$ (50,000.00)
	Project Manager, Power Supply Engineering		$ 84,000.00					$ 84,000.00				
	HCEI Biofuels Outside Engineering		$ 50,000.00						$ 50,000.00			
	HCEI Solar Outside Services		$ 200,000.00						$ 200,000.00			
	Subtotal (Other Production O&M)		$ 956,000.00									
	Subtotal ("Big Wind" + Other Production O&M)		$ 3,176,000.00									
	Without "Big Wind"		$ 2,220,000.00									
			$ 956,000.00									
												$ (1,474,000.00)
	T-7 Update Total (Rate Case Update Adjs)		$ 956,000.00	$ (1,474,000.00)	$ 2,550,000.00	$ -	$ 2,032,000.00					$ 2,550,000.00

RATE CASE UPDATE
DOCKET NO. 2008-0083
HECO T-1
ATTACHMENT 2

Revenue Requirement Impact
- Operations and Maintenance Expense

Test. No.	Item	Direct Testimony CIP CT-1 Adjs. (a)	W/O HCEI "Big Wind" Line Item Changes Direct Sales Current Effective (T-23 Upd., Att. 9, p. 1) (b)	Reverse Rate Case Update CIP CT-1 Expense (T-7 Upd., Att. 14, p. 3, 4) (c)	Add Rate Case Update CIP CT-1 Full Cost (T-7 Upd., Att. 14, p. 3, 4) (d)	Labor Expense and On-Cost Adjustment (T-15 Upd., Att. 6, p. 5-6) (T-23 Upd., Att. 9, p. 1) (e)	W/O HCEI "Big Wind" With CT-1 With Labor Expense Adj. Direct Sales Current Effective (f)	HCEI Related Labor (g)	HCEI Related Non-Labor (h)	HCEI Implem. Studies ("Big Wind") (i)	Employee Benefits Adjustment to Actuals (j)	Other Line Items (k)
T-8	TRANSMISSION AND DISTRIBUTION											
	C&M Staffing Plan:											
	Senior Construction Manager		67,800.00									$ 67,800.00
	Resource Planner		39,200.00									$ 39,200.00
	Subtotal (C&M Staffing Plan)		$ 107,000.00									
	AMI:											
	One AMI Director		$ -									
	One AMI Project Manager		$ -									
	One AMI Systems Administrator		$ -									
	Two AMI Systems Engineers		$ -									
	Subtotal		$ -									
	Management consultant		80,300.00						$ 80,300.00			
	Subtotal (AMI)		$ 80,300.00									
	Asset Management Group:											
	Manager		68,900.00									
	Director		56,400.00									
	Director		28,200.00									
	Program Manager		46,900.00									
	Program Manager		23,400.00									
	Subtotal (Asset Management Group)		$ 221,800.00									$ 221,800.00
	T-8 Update Total (C&M, AMI, Asset Management Group)		$ 409,100.00			$ (422,000.00)	$ (12,900.00)					
T-9	CUSTOMER ACCOUNTS											
	Account 901 (Supervision)		$ -									
	Account 902 (Meter Reading Expenses)		$ 353,000.00									$ 353,000.00
	Account 903 (Cust Records & Collection)		$ 182,000.00									$ 182,000.00
	Subtotal (Customer Accounts - Acct. 905.00)		$ 535,000.00			$ (192,000.00)	$ 343,000.00					
	Uncollectible accounts expense		$ -									
	Late payment charges		$ -									
	Customer Service billing clerk		$ -									
	Subtotal		$ -									
	T-9 Update Total (Accts 901, 902, 903)		$ 535,000.00			$ (192,000.00)	$ 343,000.00					
T-10	CUSTOMER SERVICE											
	Adjustments Related to the HCEI Agreement:											
	Director, Special Projects		$ 72,000.00					$ 72,000.00				
	Senior Rate Analyst and Outside Consultant Services		$ -									
	SolarSaver Pilot Program Manager		$ -									
	Customer Service Department representative		$ -									
	Subtotal (Adjustments Related to HCEI)		$ 72,000.00									
	T-10 Update Total (Adjustments Related to HCEI)		$ 72,000.00			(82,000.00)	$ (10,000.00)					

Revenue Requirement Impact
- Operations and Maintenance Expense

Test. No.	Item	Direct Testimony CIP CT-1 Adjs.	W/O HCEI "Big Wind" Line Item Changes Direct Sales Current Effective (T-23 Upd., Att. 9, p. 1)	Reverse Rate Case Update CIP CT-1 Expense (T-7 Upd., Att. 14, p. 3, 4)	Add Rate Case Update CIP CT-1 Full Cost (T-7 Upd., Att. 14, p. 3, 4)	Labor Expense and On-Cost Adjustment (T-15 Upd., Att. 6, p. 5-6) (T-23 Upd., Att. 9, p. 1)	W/O HCEI "Big Wind" With CT-1 With Labor Expense Adj. Direct Sales Current Effective	HCEI Related Labor	HCEI Related Non-Labor	HCEI Implem. Studies ("Big Wind")	Employee Benefits Adjustment to Actuals	Other Line Items
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	ADMINISTRATIVE AND GENERAL (T-11, T-13, T-14)											
T-11	Account 920 - A&G Expense - Labor											
	Sr. EVP Office (Executive)		$ (238,000.00)									$ (238,000.00)
	Sr. EVP Office (Secretary)		$ (56,000.00)									$ (56,000.00)
	Lead Corporate Accountant		$ 63,000.00					$ 63,000.00				
	Sr. Financial Analyst		$ 52,000.00					$ 52,000.00				
	Industrial Relations Consultant		$ 76,000.00									$ 76,000.00
	Corporate Planning Manager		$ 119,000.00									$ 119,000.00
	Sr. Rate Analyst		$ 76,000.00					$ 76,000.00				
	Energy Projects - Engineer #1		$ 4,000.00					$ 4,000.00				
	Energy Projects - Engineer #2		$ 4,000.00									$ 4,000.00
	Defer WFS Corp Mentorship Proj-E #1 - 3 (3 positions)		$ (82,000.00)									$ (82,000.00)
	Defer WFS Internship Proj - FS #1 - 2 (2 positions)		$ (52,000.00)									$ (52,000.00)
	HR Suite project labor change (from expense to deferred)		$ (24,000.00)									$ (24,000.00)
	Subtotal Account 920		$ (58,000.00)									
	Account 921 - A&G Expenses - Non Labor											
	Increase in consultant fees for IFRS		$ 100,000.00									$ 100,000.00
	Increase in consultant fees for Decoupling docket		$ 80,000.00						$ 80,000.00			
	Increase in consultant fees for Feed-in Tariff docket		$ 115,000.00						$ 115,000.00			
	Decrease for non-labor costs for SEVP/COO office		$ (63,000.00)									$ (63,000.00)
	Increase in HR Suite project costs		$ 11,000.00									$ 11,000.00
	Subtotal Account 921		$ 243,000.00									
	Account 922 - A&G Expense - Transferred		$ (15,000.00)									$ (15,000.00)
	Subtotal Account 922		$ (15,000.00)									
	Account 926020 - Employee Benefits Transferred		$ (553,000.00)									$ (553,000.00)
	Subtotal Account 926020		$ (553,000.00)									
	T-11 Update Total (Accts 920, 921, 922, 926020)		$ (383,000.00)									
T-13	Account 926000											
	Employee Pension and Benefits		$ -	$ (127,000.00)	$ 271,000.00						(127,000.00)	
	Long-term Disability Benefits		$ (91,000.00)								271,000.00	
	Subtotal Account 926000		$ (91,000.00)								(91,000.00)	
	Account 926010											
	Flex Credits Less Prices		$ 139,000.00								$ 139,000.00	
	Group Medical Plan		$ 1,152,000.00								$ 1,152,000.00	
	Group Dental Plan		$ (73,000.00)								$ (73,000.00)	
	Group Vision Plan		$ 2,000.00								$ 2,000.00	
	Group Life Insurance Plan		$ (259,000.00)								$ (259,000.00)	
	Other/Administration (HRS Non-Labor, T-13 Upd., Att. 1, p. 2)		$ 83,000.00									$ 83,000.00
	Subtotal		$ 1,044,000.00									
	Labor (HRS Labor, T-13 Upd., Att. 1, p.2)		$ (36,000.00)									$ (36,000.00)
	Subtotal Account 926010		$ 1,008,000.00									
	Subtotal Account 926020 (This is accounted for in T-11)		$ -									
	T-13 Update Total (Accts 926000, 926010, 926020)		$ 917,000.00									

Revenue Requirement Impact
- Operations and Maintenance Expense

Test. No.	Item	Direct Testimony CIP CT-1 Adjs.	W/O HCEI "Big Wind" Line Item Changes Direct Sales Current Effective (T-23 Upd., Att. 9, p. 1)	Reverse Rate Case Update CIP CT-1 Expense (T-7 Upd., Att. 14, p. 3, 4)	Add Rate Case Update CIP CT-1 Full Cost (T-7 Upd., Att. 14, p. 3, 4)	Labor Expense and On-Cost Adjustment (T-15 Upd., Att. 6, p. 5-6) (T-23 Upd., Att. 9, p. 1)	W/O HCEI "Big Wind" With CT-1 With Labor Expense Adj. Direct Sales Current Effective	HCEI Related Labor	HCEI Related Non-Labor	HCEI Implem. Studies ("Big Wind")	Employee Benefits Adjustment to Actuals	Other Line Items
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
T-14	Account 9302 - Misc. General Expenses											
	Develop and Demonstrate New Technology - AMI		$ 197,000.00						$ 197,000.00			
	Other Long-Term R&D strategies - Oahu Electric System Analysis		$ 250,000.00									$ 250,000.00
	Subtotal Account 9302		$ 447,000.00									
	Account 931 - Rent Expense (by lease)											
	Waterhouse Suites 105 and 106		$ 57,000.00									
	ASBT Suites 2970 and 2959		$ 470,000.00									
	CPP Suites 600, 650, and 680		$ 255,000.00									
	Waterhouse Suites 401, 402, and 403		$ 59,000.00									
	Subtotal Account 931		$ 841,000.00									$ 841,000.00
	Account 932 - Maintenance of General Plant											
	Ward parking structure ramp repairs		$ (440,000.00)									$ (440,000.00)
	Ward base yard project		$ 525,000.00									$ 525,000.00
	Check processing maintenance contract		$ 25,000.00									$ 25,000.00
	Archiving machine maintenance contract		$ 10,000.00									$ 10,000.00
	Subtotal Account 932		$ 120,000.00									
	T-14 Update Total (Accts 9302, 931, 932)		$ 1,408,000.00									
	Total A&G (Accts 920,921,922,926000,926010,926020,9302,931,932)		$ 1,942,000.00	$ (127,000.00)	$ 271,000.00	$ (931,000.00)	$ 1,155,000.00					
	Adjs. for DT Base Case to DT CT-1 Full Cost											
	CIP CT-1 (DT., HECO-702, p. 1)	$ 1,489,000.00					$ 1,489,000.00					$ 1,489,000.00
	CIP Full Cost (DT., HECO-702, p. 1)	$ (2,598,000.00)					$ (2,598,000.00)					$ (2,598,000.00)
	CPI CT-1 Average Cost (DT., HECO-1301 p. 1)	$ 125,000.00					$ 125,000.00				$ 125,000.00	
	CPI CT-1 Annualized (DT., HECO-1301 p. 1)	$ (266,000.00)					$ (266,000.00)				$ (266,000.00)	
	Total	$ (1,250,000.00)					$ (1,250,000.00)					
	Change to O&M	$ (1,250,000.00)	$ 3,914,100.00	$ (1,601,000.00)	$ 2,821,000.00	$ (1,627,000.00)	$ 2,257,100.00	$ 694,000.00*	$ 971,300.00	$ 2,220,000.00	$ 873,000.00	$ 1,345,800.00
							(1) $2,257,100 = a+b+c+d+e					
							(2) $2,257,100 = e+g+h+j+k					
							(3) O&M Expense (Full Cost) of $1,520,816 (HECO-2301) - O&M Expense (Full Cost) of $1,523,073 (T-23 Upd., Att. 2) = $2,257,000					
T-15	Associated Payroll Tax (w/ Payroll Tax Factor = 8.29%); (T-15 Upd., Att. 6, p. 5-6)					$ (102,000.00)						
	(T-23 Upd., Att. 9)					$ (1,729,000.00)						

Hawaiian Electric Company, Inc.
Apportioning the Total "Employee Benefits Adjustment to Actuals" to HCEI Related Labor

	Position Description	Testimony #	# of Positions
	Renewable Energy Power Purchase Division	T-7	2
	Renewable Energy Planning Division	"	4
	Photo Voltaic Engineer	"	1
	Project Manager , Power Supply Engineering	"	1
	Director of Special Projects	T-10	1
	Lead Corporate Accountant	T-11	1
	Sr. Financial Analyst	"	1
	Sr. Rate Analyst	"	1
	Energy Projects - Engineer #1	"	-
	Total Employee Count		12
Mult.			
	Estimated Benefit Cost per Employee (Rate Case Update, HECO T-15,		$14,700
	Attachment 6, page 6)		
	Apportioning the "Employee Benefits Adjustment to Actuals" to HCEI Related Labor		$176,400

RATE CASE UPDATE

Ref: T. Sekimura, HECO T-20, Rate of Return on Rate Base

As explained in the HECO T-22 Rate Case Update, HECO proposes a purchased power adjustment clause. The purpose of the purchased power adjustment clause is to enhance the Company's financial profile, to maintain HECO's current credit rating which will enable HECO to support new Hawaii Clean Energy initiatives. A financially stable utility will be able to invest in new renewable resources, infrastructure to facilitate the addition of new renewable resources from independent power producers, and conversion of the existing system to renewable technologies. In addition, the Company expects to enter into numerous new power purchase agreements ("PPAs") for renewable energy. A creditworthy offtaker helps to attract prospective independent power producers.

HECO is proposing the purchased power adjustment clause pursuant to Section 30 of *The Energy Agreement among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, and the Hawaiian Electric Companies*, ("Energy Agreement") executed on October 20, 2008. This agreement, which resulted from the Hawaii – U.S. Department of Energy Clean Energy Initiative, includes the following provision in Section 30:

- The Hawaiian Electric Companies will be allowed to pass through reasonably incurred purchase power contract costs, including all capacity, O&M and other non-energy payments approved by the Commission (including those acquired under the feed-in tariff) through a separate surcharge.
    - If approved, these costs will be moved from base rates to the new surcharge.
    - The surcharge will be adjusted monthly and reconciled quarterly.

As discussed in HECO T-20, the long-term, fixed obligation nature of purchased power obligations negatively impacts the Company's credit quality. One measure of how investors view purchased power obligations is the "imputed debt" calculated by credit rating agencies. Although none of the Company's existing PPAs appear on the Company's balance sheet as long term obligations, credit rating agencies "impute debt" for these long term obligations. Standard & Poor's ("S&P") provided the following explanation for "imputed debt":

> We adjust utilities' financial metrics, incorporating PPA fixed obligations, so that we can compare companies that finance and build generation capacity and those that purchase capacity to satisfy customer needs. The analytical goal of our financial adjustments for PPAs is to reflect fixed obligations in a way that depicts the credit exposure that is added by PPAs. That said, PPAs also benefit utilities that enter into contracts with suppliers because PPAs will typically shift various risks to the suppliers, such as construction risk and most of the operating risk. PPAs can also provide utilities with asset diversity that might not have been achievable through self-build. The principal risk borne by a utility that relies on PPAs is the recovery of the financial obligation in rates.[1]

Since S&P has been most transparent in its explanation of imputed debt related to purchased power expense, the Company takes the imputed debt as calculated by S&P into consideration in determining its capital structure. S&P calculates the present value of the total fixed payments over the life of the contracts, using the Company's average cost of debt as the discount rate (6%). It then determines a risk factor to apply to the contract to reflect the riskiness to the utility based on the terms of the contract and assurances of cost recovery.[2] S&P currently assigns a risk factor of 50% to HECO's firm capacity PPAs. The risk factor is applied to the present value of the fixed payments under the contract to calculate the imputed debt:

Risk Factor x Present Value of Fixed Contract Payments = Imputed Debt

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[1] Standard & Poor's Methodology for Imputing Debt for U.S. Utilities' Power Purchase Agreements dated May 7, 2007, filed as HECO-2013.

[2] In addition, in 2007, S&P revised its methodology of calculating imputed debt to include "evergreen treatment" and "all-in energy pricing" of power purchase agreements. See pp. 34-35 of HECO T-20.

The ratemaking treatment of purchased power expenses impacts S&P's view of the purchased power obligations. S&P assigns a 50% risk factor to PPA fixed costs that are recovered in base rates established in the utility's rate case. S&P views this type of mechanism as generally supportive of credit quality, but is also concerned that the utility will need to litigate the right to recover costs and the prudence of PPA capacity payments in successive rate cases to ensure ongoing recovery of its fixed costs. The imputed debt for HECO's existing PPAs at the end of 2009 is $424 million based on a 50% risk factor (see HECO-WP-2016, p. 14 of 18). The amount of imputed debt has significant impact on HECO's credit rating. S&P states: "The [HECO] consolidated financial profile is 'aggressive', reflecting in part the very heavy debt imputation Standard & Poor's Rating Services applies to HECO for its long-term power purchase agreements."[3]

S&P indicates that it will employ a risk factor of 25% in cases where a regulator has established a power cost adjustment mechanism that recovers all prudent PPA costs, because the recovery hurdle is lower than it is for a utility that must litigate time and again its right to recover costs. (See HECO T-20, p. 35 and HECO-2013.)

The imputed debt for HECO's PPAs at the end of 2009 is $212 million based on a 25% risk factor (see HECO-WP-2016, p. 14 of 18).

If the proposed purchased power adjustment clause is approved and results in a 25% risk factor assignment by S&P, there would be a $212 million decrease in imputed debt.

The reduction in imputed debt would improve HECO's financial ratios as viewed by S&P or can create room to accept more imputed debt from renewable PPAs, or some combination of the two.

[3] See Standard & Poor's Summary: Hawaiian Electric Co. Inc. dated November 26, 2008 (Attachment 1 of this update).

An improvement in the debt/total capital ratio, which would move HECO toward being able to support its current credit rating, would still result in a rating implied by that ratio that is below HECO's current credit rating. S&P has indicated numerous times over the past few years that HECO's current financial ratios are weak for its current credit rating of BBB. In its November 26, 2008 report on HECO, S&P states:

> The stable outlook reflects our expectation that, for now, HECO appears to have reasonable but not certain prospects for maintaining its existing financial profile, which is weak for the rating. Multiple near-term challenges face the company and include the uncertainties of the cost and feasibility impacts of the CEI, the potential for significant reduction in electric sales in 2009 (due to economic contraction, energy efficiency initiatives, and customer response to high prices), and a recent softening in leading economic indicators. These challenges suggest that a negative outlook or downward revision to the ratings could be possible over the outlook horizon, as further weakening in the financial profile will not support ratings, and near-term business risk will be elevated until the particulars of the CEI are in place and prove to be supportive.[4]

As shown in response to DOD-IR-54, Attachment 1, page 8 of 8 (included as Attachment 2 of this update), at the 50% risk factor, HECO's total debt/total capital ratio is 56% which implies a below investment grade credit rating of BB+ (two notches below HECO's current credit rating of BBB) for the total debt/total capital ratio. At the 25% risk factor, HECO's total debt/total capital ratio would be 51%, which improves the implied credit rating to BBB- for the total debt/total capital ratio; however this implied rating based on the total debt/total capital ratio is still one notch below HECO's current credit rating of BBB, and just above non-investment grade credit rating. A reduction in risk factor would improve the total debt/total capital ratio which will help move HECO's financial profile to be more supportive of its current credit rating.

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[4] See Standard & Poor's Summary: Hawaiian Electric Co. Inc. dated November 26, 2008 (Attachment 1 of this update).

Further, HECO anticipates increases in its actual debt as well as imputed debt as a result of numerous pending and contemplated long-term arrangements. In addition to imputed debt related to PPAs, S&P also imputes debt for all operating leases. Pending arrangements with their respective associated imputed debt include the following:

Agreement	Imputed Debt
AMI Sensus Lease (Docket No. 2008-0303)[5]	$8 million
Dispatchable Standby Generation Agreement with Airports Division[6]	$4 million
Honua PPA (25% risk factor)[7]	$2 million
Sea Solar PPA (25% risk factor)	$28 million
Kahuku Wind PPA (25% risk factor)	$4 million

Other contemplated arrangements which will likely result in additional imputed debt include the following:

Agreement	Imputed Debt
100 MW As-Available RFP	$10+ million
Wind Purchased Power from other islands	$50+ million
Feed-In Tariffs	Undetermined
PV Host	Undetermined

A decrease in imputed debt resulting from a decrease in S&P's risk factor assignment to purchased power may allow the Company to accommodate the anticipated increase in actual debt and imputed debt without degrading its financial profile and existing credit quality.

[5] The Sensus arrangement is deemed an operating lease for accounting purposes. See p. 22 of the HECO Companies' Application in Docket No. 2008-0303.

[6] The DSG Agreement with the State of Hawaii, Department of Transportation, Airports Division is an operating lease for accounting purposes.

[7] Estimated imputed debt using 25% risk factor for as-available contracts because the proposals are based on energy payments only which are requested to be fully recovered in the existing Energy Cost Adjustment Clause.

In summary, although the implementation of a purchased power adjustment clause is expected to improve the Company's credit quality, it is not expect to result in a credit rating improvement. Rather, the improvement in credit quality will help the Company to maintain its existing credit rating. To serve ratepayers as contemplated in the Energy Agreement as well as meeting normal service requirements, the Company is anticipating increases in actual debt and imputed debt. Any improvement in credit quality will be diminished to the extent that any decrease in imputed debt is offset by increases in actual debt and imputed debt.

STANDARD
&POOR'S

My Credit Profile
Hawaiian Electric Company, Inc., HI - 'BBB/Stable/A-2'

Table of Contents

Summary: Hawaiian Electric Co. Inc.

Publication date: 26-Nov-2008
Primary Credit Analyst: Anne Selting, San Francisco (1) 415-371-5009; anne_selting@standardandpoors.com

Rationale

The 'BBB' corporate credit rating assigned to Hawaiian Electric Co. Inc. (HECO) reflects the consolidated credit quality of HECO and its holding company, Hawaiian Electric Industries (HEI), whose operations are limited to the ownership of HECO and American Savings Bank (ASB; 'BBB'). HECO's 'strong' business profile reflects its ownership of regulated utility assets, which serve about 95% of Hawaii's population. HECO's credit quality benefits from an exclusive franchise to serve retail electric customers, a strong fuel and purchased power recovery mechanism, and an adequate regulatory environment whose framework has the potential to change significantly with recently announced plans to revamp energy policies on the island (discussed below). Key challenges to HECO's ratings include the execution of such plans and the impacts on the company's financial performance as function of the weakening in the Hawaii economy. The island economy is highly dependent on a limited number of industries, including tourism and construction, and local economic indicators have begun to show signs of deterioration.

The consolidated financial profile is 'aggressive', reflecting in part the very heavy debt imputation Standard & Poor's Ratings Services applies to HECO for its long-term power purchase agreements (PPAs). These obligations added about $469 million in on-balance-sheet debt 2007 and about $568 million beginning in March 2008 and reflect evergreening of PPA obligations. (Consistent with our published criteria, we assume that expiring PPA contracts are replaced with new ones at similar terms.) While we apply significant debt obligations to HECO, we also recognize the historical reasons that have led to HECO buying a substantial amount of its power supply from third-party suppliers and that the regulatory recovery of capacity costs associated with these contracts has been supportive. Thus, our 'BBB' ratings reflect consideration of the unique size of these obligations.

HECO serves Oahu; Maui Electric Co. (MECO) serves Molokai, Lanai, and Maui; and Hawaiian Electric Light Co. (HELCO) serves The Big Island of Hawaii. (The utilities do not serve the island of Kauai, where electric service is provided by a cooperative.) Consolidated reported debt outstanding at HEI as of Sept. 30, 2008, was $1.21 billion (excluding bank borrowings), and is principally composed of HECO, MECO, and HELCO unsecured debt that totaled of $904 million as of the same date. HEI also has $307 million of unsecured medium-term notes to support parent and utility operations. Bank borrowings are managed by ASB at the operating level.

In October the company entered into a massive energy policy agreement that will transform how the islands procure electricity and what role HECO plays in procurement and new generation construction. The Hawaii Clean Energy Initiative, or CEI, was signed by the state's governor; the State of Hawaii Department of Business, Economic Development, and Tourism; the Division of Consumer Advocacy of the State of Hawaii Department of Commerce and Consumer Affairs; and Hawaiian Electric Co. Inc. The CEI sets forth ambitious energy goals that include:

- Introducing legislation that will increase renewable portfolio standards to 25% by 2020 (the goal now is 20% now) and 40% in 2030 (a new standard);

- Pursuing the integration of approximately 1,100 MW of renewable energy sources, with 700 MW to be implemented within five years;
- Constructing an undersea cable connecting Maui, Molokai, and Lanai into one electrical grid to allow the integration of an additional 400 MW of renewable wind power;
- Converting HECO's existing fossil-generation to biofuel, with preferential purchasing provided to local fuel suppliers;
- Installing advanced meters to implement time-of-use rates that reward customers with lower electric rates for using power during off-peak times;
- Eliminating existing systemwide caps on net energy metering to allow customers to produce their own renewable energy and obtain bill credits for excess generation;
- Implementing an energy efficiency portfolio standard, with administration of planned programs shifting to a third party, rather than the utility; and
- Creating a feed in tariff by mid-2009 to promote distributed, smaller-scale renewable generation such as solar photovoltaics.

To incentivize HECO to achieve these goals, the CEI contemplates several protections that may support credit quality as the company transitions to this new model. These features include:

- Decoupling revenues from sales. This is a critical component of the plan from a credit perspective. Without decoupling, HECO could expect to see lost revenues as its sales drop through energy efficiency and off-grid investments. Decoupling is to be implemented beginning with the interim decision in HECO's 2009 rate case, which is pending before the commission. HELCO and MECO will file 2009 rate cases to implement decoupling for these utilities.
- Creating an energy infrastructure surcharge (CEIS) to recover costs. The CEIS would reset annually and is designed to recover HECO's infrastructure investment required to support the program. HECO may also use the CEIS to recover any costs stranded because of the CEI. This is favorable as it provides the company with a clear mechanism for cost recovery and provides for annual adjustments.
- Providing HECO with the opportunity to get construction work in progress (CWIP) treatment. HECO may file for CWIP, which the commission would need to approve on a project-by-project basis.
- Funding energy efficiency programs through a public benefit charge that will be initially set at 1% of utility total revenues in the first two years, rising thereafter. Administration of energy efficiency programs will be shifted to a third party. This is a benefit for credit quality as it clearly delineates the costs of achieving energy efficiency on the company bill and provides a funding vehicle for the programs.

The CEI provides the framework and in places is specific on program design and implementation schedules. Nevertheless, some of the details of major provisions, including the structure of the CEIS, will be left to the commission to create on a timely basis. As a result, whether the CEI is ultimately credit-neutral for the company will depend on whether HECO is able to develop detailed implementation plans in partnership with the commission and stakeholders. For example, the commitment to decouple HECO's rates in the CEI appears to be tentative, as the CEI clearly allows the commission to discontinue decoupling if it is not "operating in the interest of ratepayers."

Credit concerns around the CEI focus on three areas: the feasibility of the plan and what the ramifications are for HECO if it cannot meet the ambitious program outlined in the CEI, the costs of CEI and whether ratepayers will ultimately be willing to bear them, and the potential impact on reliability.

The level of renewable, energy-efficiency, and distributed-generation investment is significant. Just focusing on HECO (e.g., excluding goals for MECO and HELCO) the CEI would require 148 MW of renewable installed by 2010, jumping to 890 MW by 2015. Similarly for energy efficiency and distributed generation goals, 169 MW of measures would need to be in place by 2010, rising to 1,015 MW by 2015. There are also concerns related to the feasibility of sourcing the level of biofuel that HECO will require. Notably, the CEI does not include penalties for noncompliance with the CEI; we would expect this issue to be taken up in future regulatory proceedings.

It is unclear what the cost ramifications of such a program are and how it would compare with the state maintaining its very high dependence on petroleum oil to meet energy needs. The majority of electric power generated in Hawaii is produced through burning imported liquid fossil fuels. Fuel oil comprises around 77% of the three utilities' power supply portfolio. From a ratings perspective, this has not been a significant issue because a monthly fuel and purchased power adjuster has allowed the utility to stay current on its fuel recovery despite gyrations in the price of oil.

But in 2008, customers have seen significant electric bill increases with increasing oil prices in the first half of the year. Rate impacts caused by oil prices, which HECO cannot control, are inevitably a public relations issue for the company that is difficult for it to manage. But given the current state of renewable technology and the cost of biofuel, the CEI implicitly requires Hawaii's residents to trade off higher electric costs for less rate volatility. This is particularly true over the next few years if oil prices continue in their decline as a function of recessionary pressures. Hawaii already pays some of the highest rates in the U.S. On the other hand, the plan may assist the state in managing the costs of carbon regulation. Rating implications will focus squarely on the retail rate impacts of the initiative over time.

Electric system reliability will also need to be a major consideration going forward, as the issues presented by integrating substantial intermittent solar, wind, and distributed-generation resources is not trivial. Moreover, HECO's long-term commitment to the HECO not to build more biofuel generation without incremental retirement of the existing resources raises issues of how it can reliably meet load growth, especially in the event that energy efficiency initiatives are lagged. Reserve margin issues have been an ongoing concern in parts of the islands.

Also of interest is the state's intention to develop an undersea transmission cable as part of the CEI to bring to Oahu wind power from to-be-constructed large-scale projects developed on other islands. (The majority of the population resides on Oahu but wind resources are poor there.) Despite the fact that CEI clearly tasks the state or a third party to undertake the development, construction, and operations of an undersea cable, the initiative contemplates that HECO might be a co-partner in financing, and could possibly issue debt to support the project. The details on any such arrangement would be important to credit quality, as HECO's balance sheet may not be able to withstand a large infrastructure investment of this type. HECO's consolidated debt profile already reflects significant leverage, in part due to our PPA debt imputation. The CEI contemplates the company issuing preferred stock and hybrid offerings to fund clean energy initiatives as a strategy to avoid the full impact of additional debt on the balance sheet. We would note that aggressive use of hybrid or preferred offerings would likely lead to adverse rating consequences.

The next few years are likely to be pivotal for company credit quality, as the CEI program details will likely shape the company's financial position for years to come. We would note that going into the CEI, the company is not well positioned financially. HEI's results were notably poor in 2007-- resulting in lower consolidated financial metrics -- due to the need for sizable interim rate relief, which was granted by the Hawaii Public Utilities Commission in late 2007 and began to improve ratios modestly in 2008. Consolidated financial performance for HEI on a trailing 12-month basis ended Sept. 30, 2008, was 13.5% funds from operations (FFO) to total debt, and 3.3x FFO interest coverage. Debt to total capitalization is 61.5%, which reflects consolidated HEI operations.

We would expect 2009 results to be dampened by a slowing economy, which is expected to depress electric sales. (Notably, any decoupling benefits the company may expect to see through the CEI are not likely to be implemented before late 2009 or early 2010.) After months of not showing sizable economic weakening relative to the mainland, Hawaii's major economic indicators are reflecting a significant slowdown that began in mid-summer. According to the state's tourism authority, visitor arrivals and visitor days fell 9.1% and 7.6% year-to-date, respectively, compared with the same period in 2007. The authority predicts visitor arrivals and visitor days will continue to decline 10.1% and 9.7%, respectively, for the full year 2008 and further decline by 1.9% and 1.7% in 2009; recovery will not begin until 2010. Visitor expenditures also fell 7% during the same period. Construction activities have also slowed down. Hawaii's unemployment rate of 4.5% at the end of September 2008 continues to remain below the national average of 6.1%. However, the decline in tourism is expected to result in further job losses in the next year.

This softening in the economy, together with high prices of fuel oil year to date and conservation, has led to a 1.2% year-to-date reduction of kilowatt-hour of sales, which management has publicly estimated to have reduced earnings by $4 million after-tax for the nine months ended Sept. 30, 2008. We expect this downward trend to continue going into 2009 and believe that the decline in sales volume could impact the company's results of operations.

On the rate case front, all three utilities are awaiting final orders on interim rate relief award. HECO has been awarded interim relief of $70 million based on its 2007 test year rate case, HELCO has been awarded $25 million based on a 2006 test year rate case, and MECO has been awarded $13 million in its

2007 test year rate case. Also, in July 2008, HECO filed a request for a general rate increase of $97 million -- 5.2% over the current rates -- based on a 2009 test year, an 8.81% rate of return, an 11.25% return on average capital employed, and a $1.41 billon rate base. HECO's application requested an interim increase of $73 million on or before the statutory deadline for interim rate relief and a step increase of $24 million based on the return on net investment of the new combustion turbine generating unit and recovery of associated expenses to be effective at the in-service date of the new unit, scheduled for the end of July 2009. HECO's application will be expanded to address decoupling.

Short-term credit factors

The short-term corporate credit and commercial paper (CP) rating on HEI and HECO is 'A-2'. HEI and HECO's liquidity has been strained as a function of increased short-term debt balances to support capital expenditures. Given substantial deterioration in the credit markets, we would expect the company in the next quarter to make efforts to increase its cash and available credit position through equity, debt issuances, or via a new credit line facility as a defensive measure.

HEI and HECO have credit facilities of $100 million and $175 million, respectively. As of Sept. 30, 2008, HEI had only $10 million in remaining capacity on its line (assuming capacity for CP balances is reserved in the event of disruption in this market). HECO had $34 million. While consolidated cash and cash stood at $166.7 million as of Sept. 30, 2008, most of this cash, about $128 million, resides at ASB, and bank regulations would require certain tests to flow cash to HEI. HEI's cash balances are estimated to be $23.6 million, which include HECO's $14.8 million. Thus, total liquidity as of Sept. 30 is less than $65 million.

The company had exposure to $15 million in its credit facilities, but in the third quarter these obligations were assigned to the Bank of Hapoalim BM. HEI and HECO do not face any remaining maturities in 2008 or 2009. Both HECO and HEI's unsecured revolving credit line expire on March 31, 2011.

Outlook

The stable outlook reflects our expectation that, for now, HECO appears to have reasonable but not certain prospects for maintaining its existing financial profile, which is weak for the rating. Multiple near-term challenges face the company and include the uncertainties of the cost and feasibility impacts of the CEI, the potential for a significant reduction in electric sales in 2009 (due to economic contraction, energy efficiency initiatives, and customer response to high prices), and a recent softening in leading economic indicators. These challenges suggest that a negative outlook or downward revision to the ratings could be possible over the outlook horizon, as further weakening in the financial profile will not support ratings, and near-term business risk will be elevated until the particulars of the CEI are in place and prove to be supportive. Consistent, timely rate relief will continue to be key, and could offset or mitigate the effects of a declining economic environment, but decoupling or other measures are not expected to be available to the company before late 2009 or early 2010. Given these challenges, higher ratings are not foreseen during the outlook horizon and would need to be accompanied by sustained and improved financial performance.

Hawaiian Electric Company, Inc.

Financial Ratios Based on Existing Purchased Power Agreements

Test Year 2009

Financial Risk Profile

HECO

	Minimal			Modest	Intermediate			Aggressive			Highly Leveraged	
Based on **Strong** Business Risk Profile **Rating**	AA	AA -	A +	A	A -	BBB +	BBB	BBB -	BB +	BB	BB -	B+
	Investment Grade								Not Investment Grade			

		DOD-IR-54 page ref.
WITHOUT Rate Relief		
Funds from Operations / Average Total Debt	14%	p. 2
Funds from Operations Interest Coverage	3.4 x	p.3
Total Debt / Total Capital	56%	WP-2016 p. 4
WITH Rate Relief (50% risk factor for puchased power obligations)		
Funds from Operations / Average Total Debt	19%	p. 4
Funds from Operations Interest Coverage	4.2 x	p. 5
Total Debt / Total Capital	56%	WP-2016 p. 9
WITH Rate Relief (25% risk factor for puchased power obligations)		
Funds from Operations / Average Total Debt	23%	p. 6
Funds from Operations Interest Coverage	5.1 x	p. 7
Total Debt / Total Capital	51%	WP-2016 p. 13

These ratios are based on the methodology used by S&P to calculate adjusted financial ratios for purposes of ratings analyses. The ratios take into account the debt equivalent (off-balance sheet purchased power and operating lease obligations). The rating guidelines are based on S&P's article "U. S. Utilities Ratings Analysis Now Portrayed in the S&P Corporate Ratings Matrix" filed as HECO-2014. Based on the S&P matrix, HECO proportionately assigned rating categories to financial ratios as follows:

	BBB	BBB-	BB+
Funds from Operations / Average Total Debt	23.33% - 30%	16.67% - 23.33%	10% - 16.67%
Funds from Operations Interest Coverage	3.0x - 3.5x	2.5x - 3.0x	2.0x - 2.5x
Total Debt / Total Capital	50% - 45%	55% - 50%	60% -55%